Crossing the Delaware for Transportation Independence:
Improving Bicycle and Pedestrian Access to the Benjamin Franklin Bridge

Bicycle Coalition of Greater Philadelphia

June 2010

Table of Contents

"Santa Maria 1492" (left) and "Conestoga Wagon 1625" (right) - These images are from a set of tiles found within the massive stone anchorages of the Benjamin Franklin Bridge. Altogether, they tell the history of transportation. (Photos courtesy of Robert P. Thomas, AIA.)

1. Executive Summary

The iconic Benjamin Franklin Bridge links Central Philadelphia to Camden, New Jersey. Opened in 1926, the Ben Franklin Bridge once featured right of ways for trolleys, subways, pedestrians and cars. Today, the Bridge carries motor vehicles, the PATCO High Speed Line and is one of only two Delaware River Crossings in Philadelphia that has a pedestrian walkway. The walkway is the only pedestrian and bicycle connection between Philadelphia and Camden without a fare or toll and offers one of the best views of the Philadelphia's skyline and the bustling Delaware River.

Five-hundred bicyclists and pedestrians use the Bridge's walkway daily, yet accessing it can be a challenge. No signs point to the walkway entrances and warning signs and fences make the entrances uninviting, while access ramps and narrow passageways are barriers to accessibility. Access hours to the bridge are limited and the Delaware River Port Authority (DRPA) has no snow removal policy, interrupting winter access. The greatest barrier, however, is a three story stairwell on the Camden side of the river that makes the south walkway inaccessible for the disabled and an obstacle for bicyclists.

Based on the findings of this report, the Bicycle Coalition of Greater Philadelphia recommends that the DRPA adopt the following goals:

- Improve walkway access through updated infrastructure, longer hours and full ADA compliance.
- Improve the approach routes and walkway entrances on both sides of the Bridge for pedestrians and bicyclists.
- Reduce weather related closings by adopting a consistent snow removal policy.
- Enhance community relations through public involvement and communication.
- Publicize and market the bridge as a true regional attraction for all users.

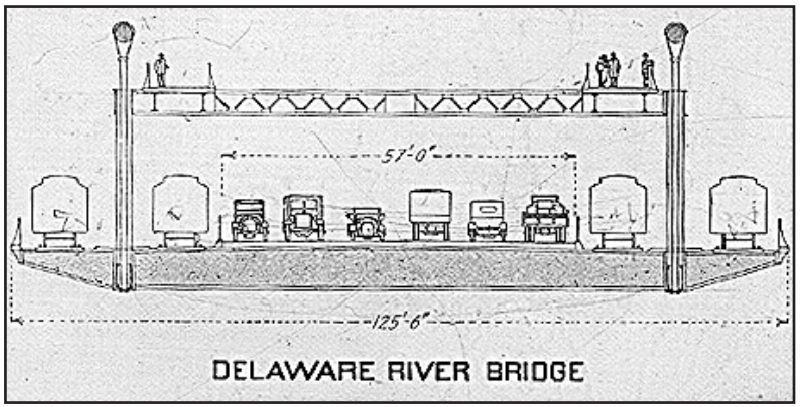
Issues of health, quality of life, access to jobs, climate change and enhancing the Delaware River Waterfront on both sides of the river are all reasons to improve the Benjamin Franklin Bridge so that it more equitably accommodates all users. This report provides a road map for the Delaware River Port Authority (DRPA) to create a world class bridge walkway that strengthens the bicycle and pedestrian links between New Jersey and Pennsylvania.

2. The History of the Benjamin Franklin Bridge[1]

On December 12, 1919, Pennsylvania and New Jersey established the Delaware River Bridge Joint Commission to build the first fixed crossing between the two states. The Commission appointed Rudolphe Modjeski, the engineer who oversaw the completion of the Manhattan Bridge, as Chief Bridge Engineer. Paul Phillipe Cret, designer of Rittenhouse Square and an instrumental contributor to the Benjamin Franklin Parkway, was hired as the Supervising Architect.

Construction of the Bridge began on January 6, 1922. The main roadway originally accommodated six lanes for vehicular traffic and two streetcar tracks. The streetcar tracks, which were never used, were soon converted into two additional vehicular lanes. Two rapid transit tracks were constructed on outboard structures on either side of the roadway, but were left unused when the bridge opened. Above the rapid transit tracks were two pedestrian walkways. The deck could support a load of 60,000 tons.

The granite anchorages on either side give the bridge an appearance of massiveness. Each of these towers, to which the steel cables are attached, covers three-quarters of an acre. The two anchorages, which together required 216,000 tons of masonry, rise 175 feet above the ground. Their "toeholds" sink into the earth 65 feet into the Philadelphia side, and 105 feet into the Camden side.



This bridge section drawing by Supervising Architect Paul Philippe Cret and Chief Bridge Engineer Rudolphe Modjeski shows 10 lanes of traffic, including both rail and trolley lines running in each direction.

When the Delaware River Bridge opened to traffic on July 1, 1926, in time for the nation's sesquicentennial, it claimed the longest main suspension span. It was an instant success, attracting the 35,000 vehicles a day that paid 25 cents to cross the Delaware River. During its first three months in operation, the bridge carried two million vehicles, twice the amount of vehicles forecast for that period.

While it lost its main span title to the George Washington Bridge in 1931, the Benjamin Franklin Bridge spawned a new era of long-span suspension bridge construction that lasted through the 1930's.

3. The Case for an Open and Accessible Walkway

Increase regional mobility options

On October 31st 2008, 100,000 passengers rode the Port Authority Transit Corporation (PATCO) Highspeed Line to attend the Phillies Victory Parade, a record high for single day ridership.

PATCO's Broadway Station in Camden (Walter Rand Transportation Center) handled huge crowds because connecting RiverLINE trains were overflowing and New Jersey Transit (NJT) buses could not negotiate the huge pedestrian traffic jams in Philadelphia.[2]

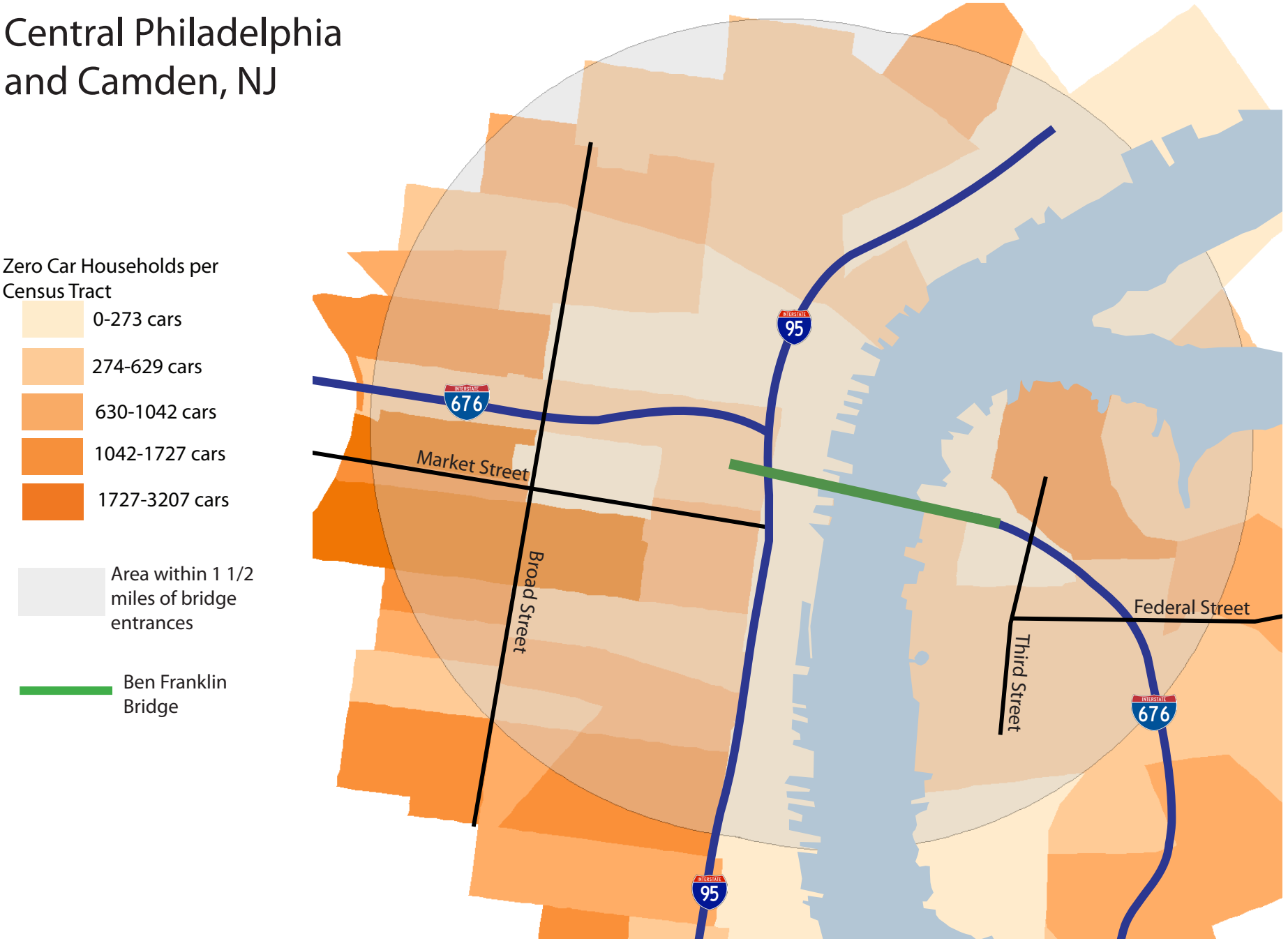
The Benjamin Fraklin Bridge Walkway

The only bright spot was the Ben Franklin bridge walkway, which those in the know used to beat the gridlock. One walkway user stated that it "was ten times more crowded than I have ever seen it."[3]

Philadelphia's Emergency Readiness Evacuation plan designates the Bridge as a "Pedestrians Only Route."[4] The 2003 Blackout in New York demonstrated how important adequate pedestrian crossings are as New Jersey bound residents were left stranded in Manhattan, forced to wait for inadequate ferry service or spending the night on the street.

While the Philadelphia-Camden crossing does not have the same pedestrian/bicycle volume as the Manhattan-Brooklyn connection, there are demographic factors that suggest a latent demand with future development. Nearly 50% of the households within two miles of the bridge walkways are car free.[5] The average annual household income in three adjacent North Camden census tracts is just $9,000 resulting in monthly net household income of $660 a month.

Zero Car Households in Central Philadelphia and Camden, NJ



Data: US Census, 2000

Typical Monthly Costs of Commuting North Camden to Center City

Travel Mode	Monthly Cost	Measure	Source
PATCO	$59.40	44 Rides @ $1.30	PATCO Website
NJ TRANSIT Bus	$79.20	44 Rides @ $1.80	NJ TRANSIT Bus Fare Chart
Drive	$400+	22 Round Trips @ $4 plus $300 monthly parking, gas and tolls	DRPA Website Colliers Int. 2008 Parking Rate Survey
Bicycle	$20	Based on estimated cost for annual bicycle maintenance	
Walk	$0		

Provide Health and Livable Transportation Options

Fifty-seven percent of the population in the Greater Philadelphia region is either overweight or obese. The U.S. Department For Health and Human Services recommends at least 30 minutes of moderate physical activity 5 days a week.[6] The Bridge walkway is already a popular with fitness walkers and a one-way trip takes about 30 minutes from end to end.

The Ben Franklin Bridge is also the key connector of trail networks that are being planned or under construction including the Camden GreenWay network, The East Coast Greenway and the Schuylkill River Trail. The Ben Franklin Bridge is the *key link* in the emerging regional trail network.

Enhance Regional Sustainability

The Benjamin Franklin Bridge was originally designed to support multi-modal travel. Therefore, it is fitting that it supports travel freedom and regional sustainability efforts. Replacing car trips with trips by foot or bike reduces carbon emissions and improves air quality. The DRPA has launched several sustainability initiatives including the Green Ports program and EZ Pass Green Pass, which offers a toll discount to ultra low emission vehicles.[7]

Climate Change is a regional priority as New Jersey has released its Greenhouse Gas Emissions Plan[8] and Philadelphia is calling for a 10% reduction in city vehicles miles traveled by 2015.[9] The Delaware Valley

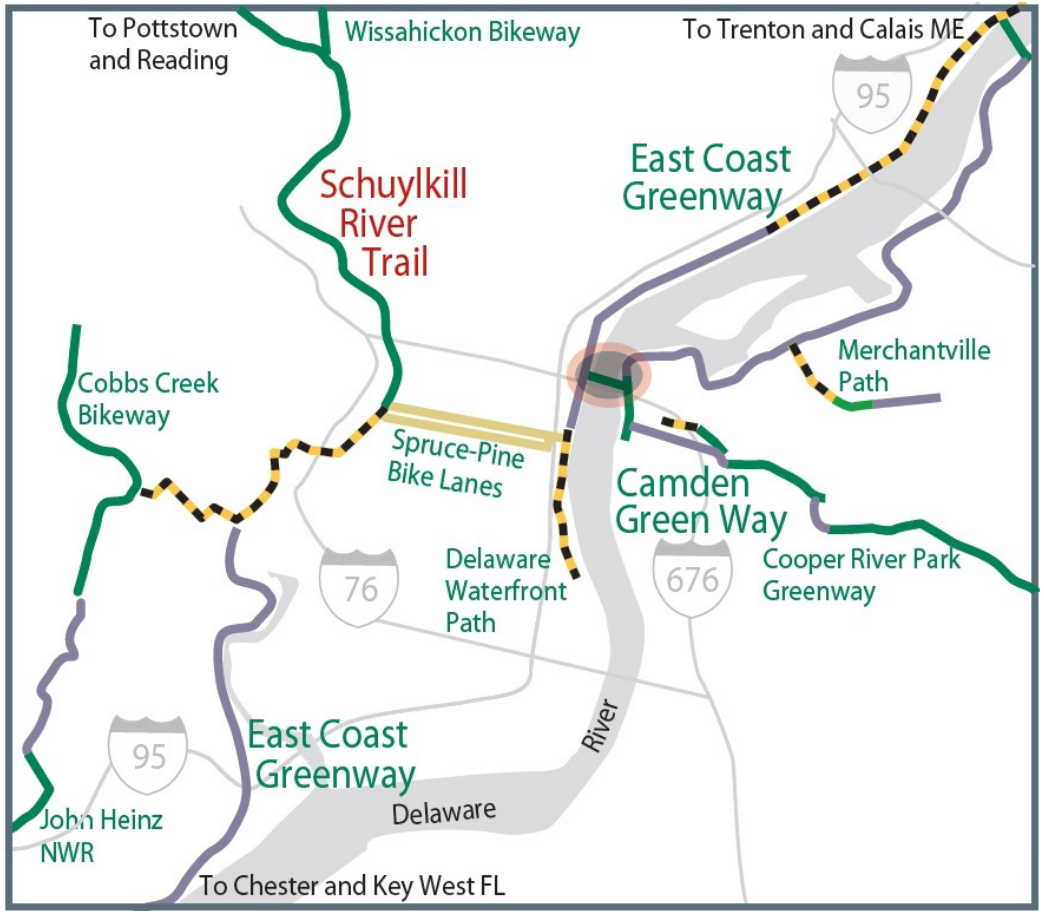
Regional Planning Commission has released a regional greenhouse gas inventory and advocates for a 50% reduction in CO2 emissions by 2035.[10]

Residents of the Greater Philadelphia region are increasingly migrating toward greener modes of transportation, and it is critical for their well being that this shift be supported by their transportaion infrastructure. Several populations have been identified who are directly affected by walkway access policies and whose lives would be improved by creating an open and accessible link:

- Residents who live immediately adjacent to the walkway, and use it as a destination for walking and bicycling,
- Rutgers students who attend daytime and evening classes,
- Bicycle commuters from both Philadelphia and South Jersey,
- Business owners in close proximity to the walkway in Philadelphia, and,
- Philadelphia residents going to the Camden Waterfront.

There are many reasons why improving access for pedestrians and bicyclists matters. It can improve emergency readiness, connect low income populations with job and regional trails, stimulate physical activity and reduce the buildup of harmful air pollutants and greenhouse gases.

Trail Connections betweeen Camden and Philadelphia



4. Current Bridge Walkway Conditions

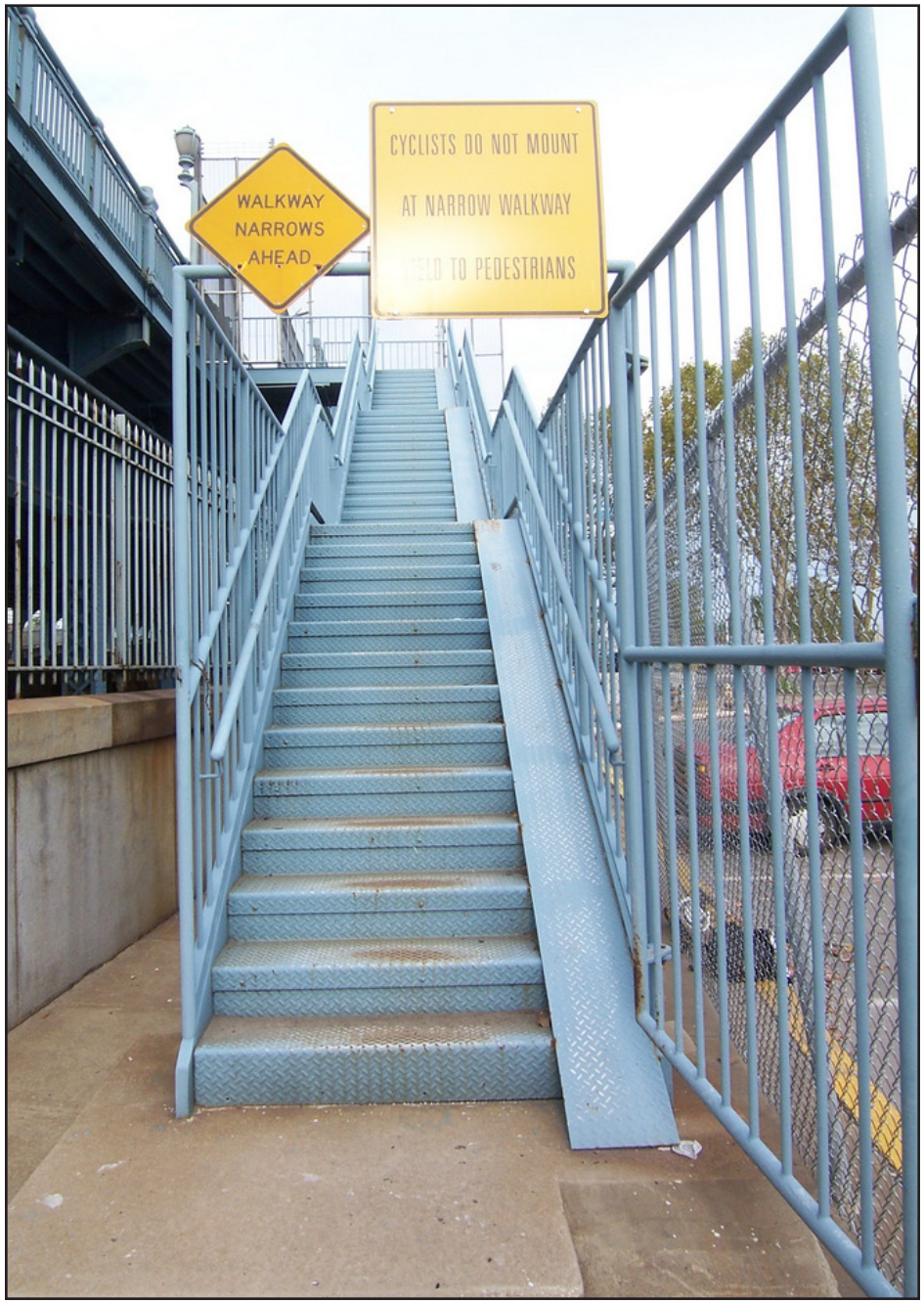
The Ben Franklin Bridge has an elevated walkway on each side of the structure. Walkway hours are currently 6AM to 9PM from May to October and 6AM to 8PM from October to April; DRPA Police patrol the bridge.

The DRPA contends that walkway hours are limited due to security and police manpower concerns. The DRPA's policy is to open one walkway to the bicyclists and pedestrians while ongoing maintenance is performed on the opposite walkway. Bridge painting is a long, nearly constant activity.

The South walkway eastbound entrance is the principal facility for bicycle and pedestrian access.

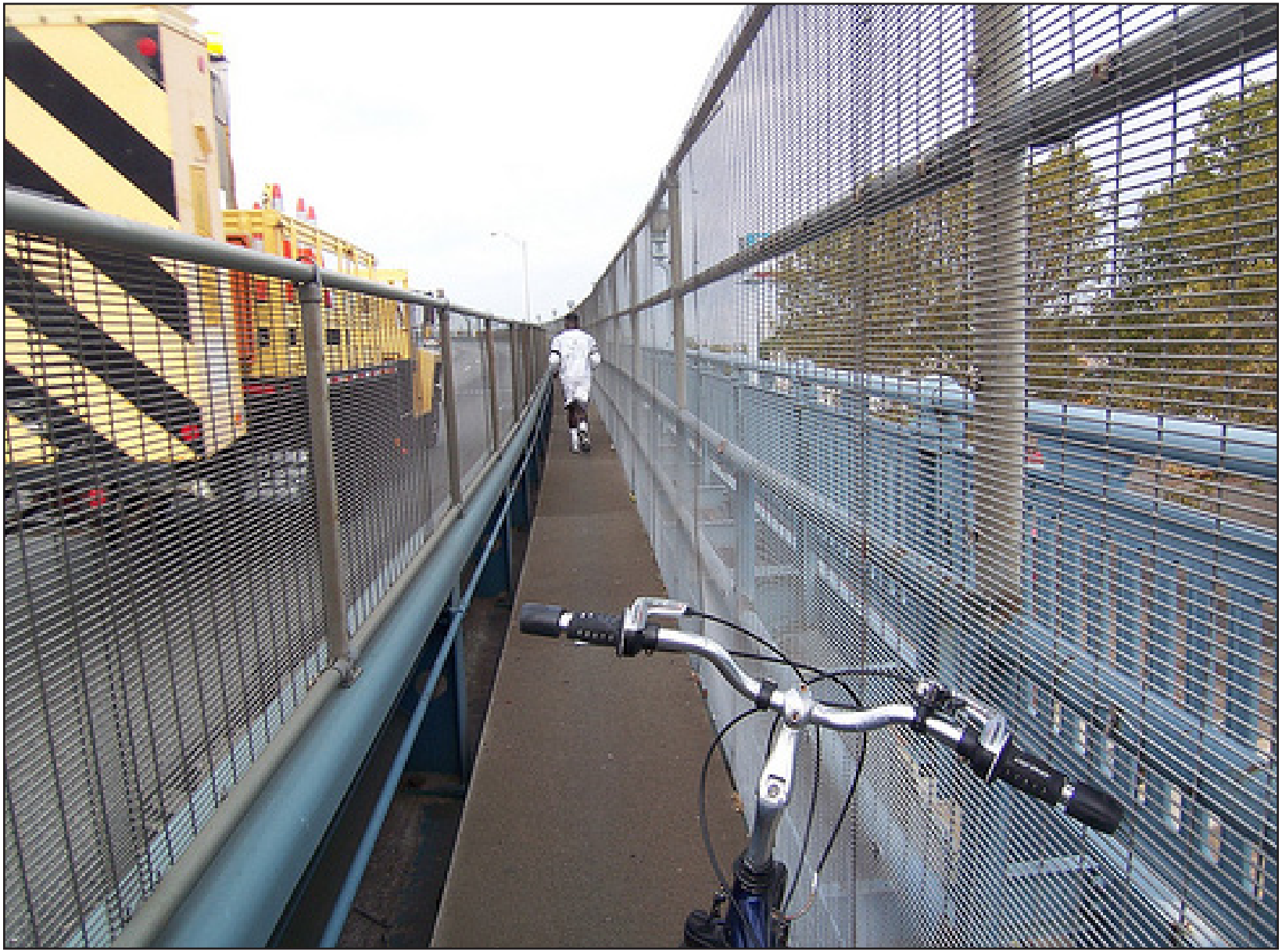
The North walkway is only used when the South walkway must be closed for maintenance.

The North and South walkways were designed to be twin structures, but the east end of the north walkway was never completed.



North walkway stairs in Camden

The final portion of the North walkway is a 3 1/2 foot wide “catwalk” leading to the Camden stairway. This narrow passage, known locally as the “Cattle Chute,” is so narrow and confining that it is an impediment for use. It is impossible for two bicyclists or pedestrians to pass each other.; one person must back up to let the other one pass.



The North walkway, or “cattle chute”

The south walkway is not accessible from New Jersey for those who are physically disabled or impaired, and it is challenging for those carrying a bicycle up and down 39 stairs. Despite all of the problem with access, the Bridge Walkway is used on a regular basis by both pedestrians, joggers and bicyclists. In June and July 2009, Philadelphia Bicycle Ambassadors and volunteers completed two all-day traffic counts of walkway users at the Philadelphia bride anchorage. In June, the Bicycle Coalition counted 499 pedestrians, joggers and bicyclists, translating to 38 users per hour. In July, 453 people were counted, however heavy thunderstorms diminished the number of users in the evening.

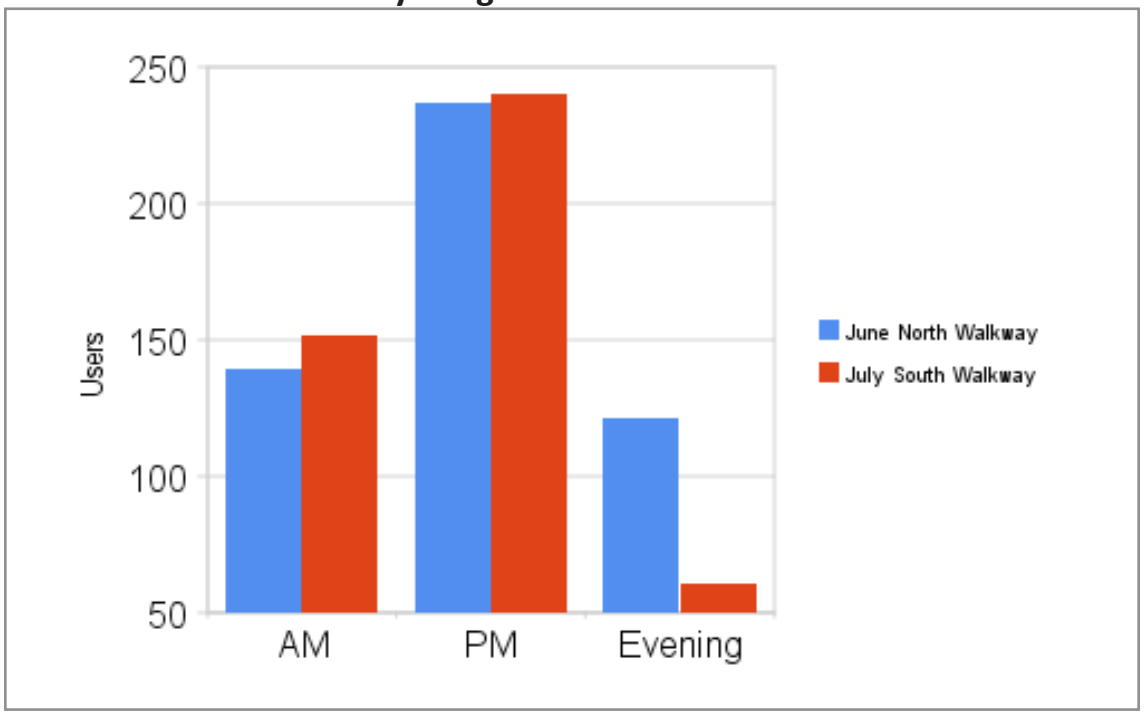
This level of usage is comparable to the Manhattan Bridge's numbers during the past decade. Since 1985, the NewYork City Department of Transportation (NYCDOT) has been conducting an annual 12 hour count of cyclists entering and exiting the center of Manhattan. Known as the NYC Bicycle Screenline Count, it includes counts of cyclists crossing the four East River bridges. I n 2001, 147 people a day were counted using the Manhattan Bridge; in 2008, the number was up to 2,232 people a day. The increase in usage on the Manhattan Bridge is related to an improvement in the pedestrian walkway and the institution of 24/7 access.

Solutions for linking bridge walkways to surface levels

San Fransisco-Oakland Bay Bridge Proposal

Schuylkill River Valley Path connection to Street Level

North and South Walkway Usage



In February 2010, the U.S. Department of Transortation announced that it was providing federal stimulus funding to ten trail projects in Camden and Philadelphia through their TIGER discretionary program. One of those trail segments is to construct on-street bike lanes and a sidewalk pedestrian trail on Pearl Street from the terminus of the Ben Franklin Bridge Walkway to Camden County's Wiggins Park Promenade along the waterfront. This particular segment is receiving $1.9 million from the TIGER program and will be completed by February 2012.

Accelerating and coordinating the construction of an ADA accessible ramp to replace the current south walk stairs would make a significant difference to improving access to and from the Ben Franklin Bridge. Currently, DRPA's Capital Program (dated 2010) has allocated $3 Million for the walkway to be spent starting in 2012. It would be a missed opportunity to finish the Pearl Street improvements without simultaneously improving access to the Bridge. The lack of an ADA accessible ramp after February 2012 will accentuate the gap that will continue to exist between Camden and Philadelphia even after the expenditure of TIGER funds. The following page illustrates two potential ramp alignments.

Two Strategies for the South Walkway Landing in Camden

The existing south walkway landing at 4th Street in Camden is a three-story staircase, which is not accessible to bicycle or wheelchair users.

Alternative 1: The white dotted line shows a gentle extended walkway that could run to the end of the bridge near 5th Street and land in a welcoming gateway at Rex Place on the Rutgers Camden campus.

Alternative 2: A somewhat steeper ramp could run for a few hundred feet and switch back to 4th Street. This approach is similar to the Walnut Street landing to the Schuylkill River Trail in Philadelphia.

Recommendations to Improve Walkway Access:

- Accelerate the design of an ADA accessible ramp on the south walkway in Camden so that construction is coordinated with the construction of the TIGER-funded Pearl Street project.
- Accelerate the expenditure of DRPA capital funds to build the ADA accessible ramp on the south walkway.
- Install security cameras on the walkway and focused on walkway entrances for police surveillance to improve safety and allow for late night access.
- Adopt a 7-day 10pm night closure from April to October.
- Install Call Boxes.
- Remove the catwalk and complete the north walkway to the Camden Steps.

5. Improve Bicycle and Pedestrian Approach Routes to the Bridge

Currently, entrances to the walkways on both sides of the Delaware are covered with with razor wire and anti-scale perimeter mesh fences. The area is crowded with a number of warning signs; the overall effect is unwelcoming and intimidating for new users. (See photo on page 14.)

On the Philadelphia side, the walkway entrances are level with the sidewalk; a set of stairs make access more difficult for bicyclists and pedestrians on the Camden side. The stairs have steel plates attached allowing bicyclists to push their bikes up the stairs or carefully roll the bikes down the steep grade. The North Camden side entrance requires a long walk along chain link fences that borders the DRPA Maintenance Yard. Below are two photos of examples of more welcoming entrances at the Brooklyn Bridge.

Brooklyn Bridge welcome sign.
Photo on Hazboy's Photostream on Flickr:
http://www.flickr.com/photos/hazboy/3418342396/

Brooklyn Bridge Sign welcoming differently abled. Wheelchair access from Brooklyn across to Manhattan.
Photo on Captainsticky's Photostream on Flickr:
http://www.flickr.com/photos/captainsticky/2424864819/sizes/l/

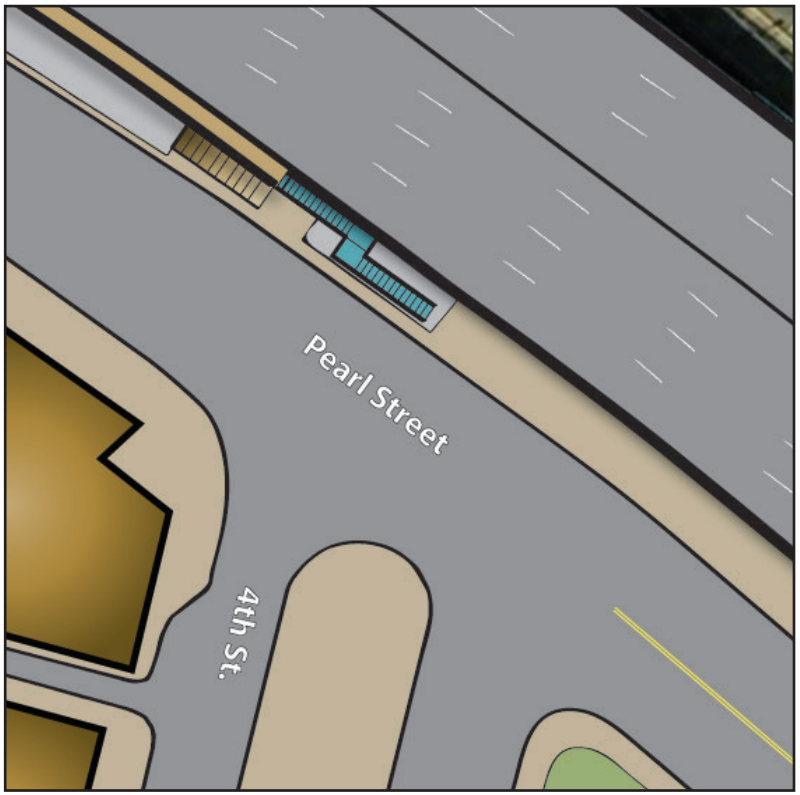
The south entrance on the Philadelphia side of the Benjamin Franklin Bridge Walkway is shown closed for maintenance. The DRPA can consolidate the overwhelming number of signs.

Getting to the Bridge's Walkway Entrances

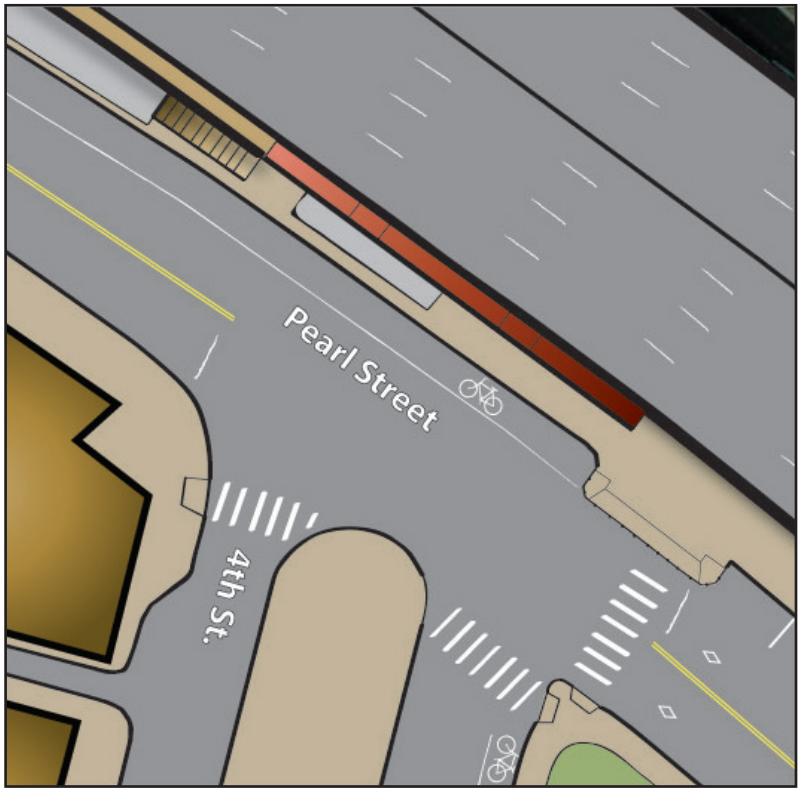
Pedestrian and bicycle access points are poorly connected to their surroundings. For example, The Rutgers Camden campus is across the street from the pedestrian bridge entrance, yet their are no crosswalks or bike lanes connecting the two. On the Philadelphia side, though the walkway meets the street at grade, Philadelphia bound bicyclists are forced to illegally ride against traffic. Access to 4th Street is easier but it requires an uncomfortable ride downhill on belgian block.

Camden South Walkway

There are no crosswalks or curb cuts, and parking spaces are uninterrupted creating blind spots for pedestrians and motorists. The drawings below offers some ideas for possible pedestrian improvements.



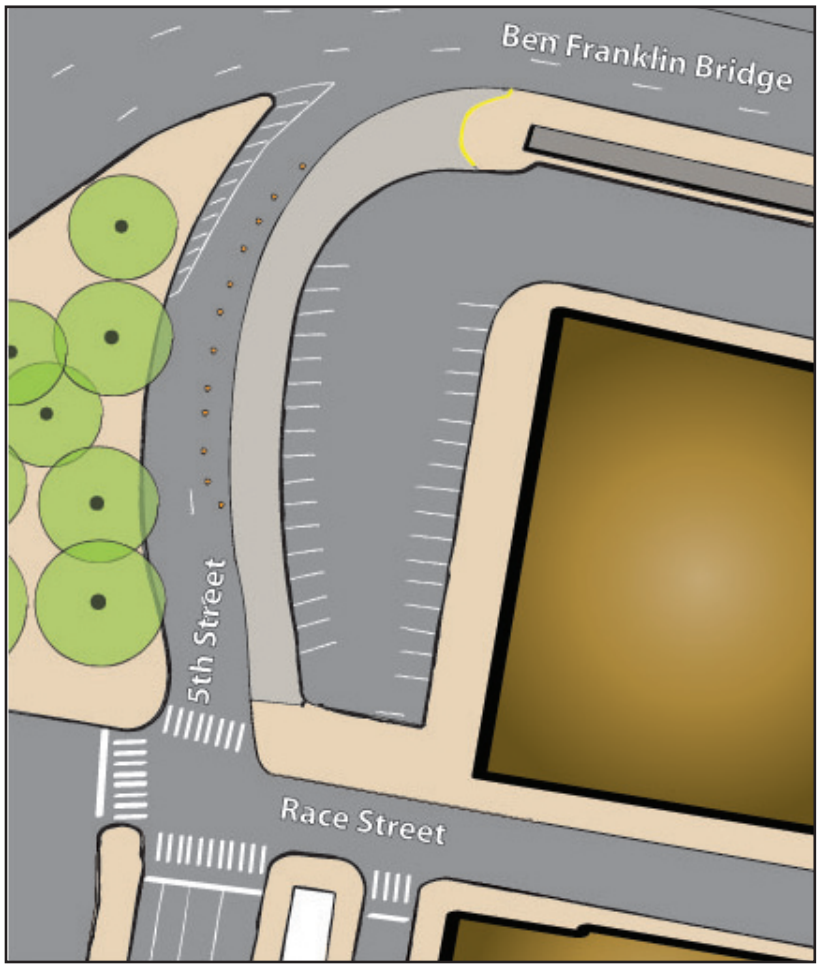
Camden South Walkway - Current



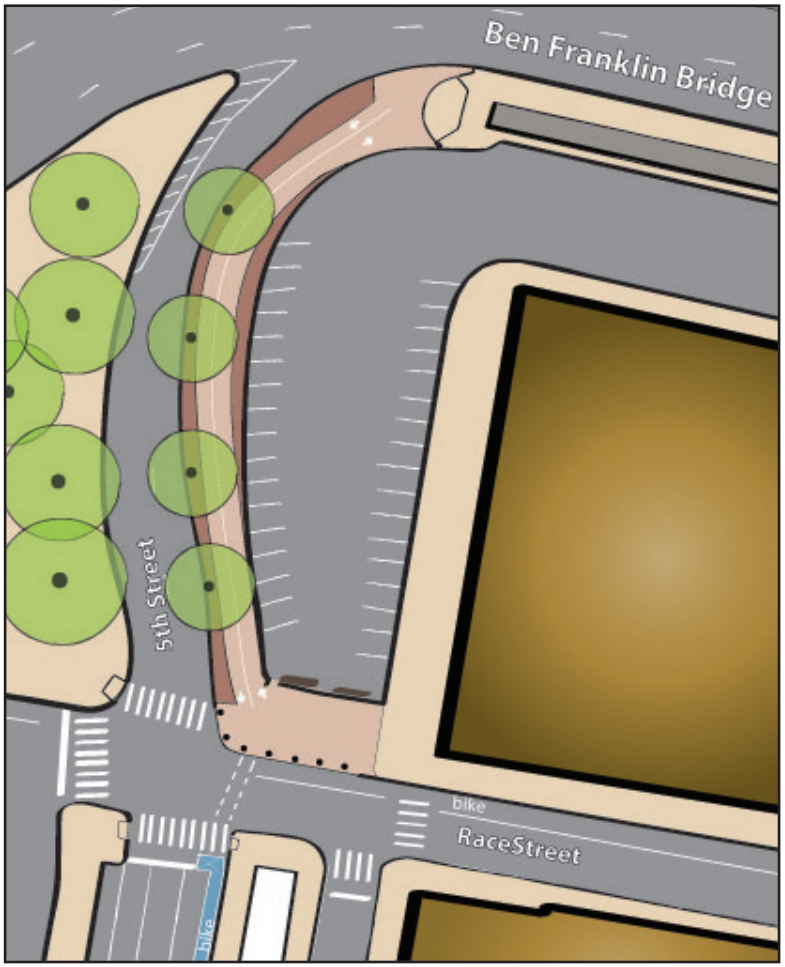
Camden South Walkway - Proposed

Philadelphia South Walkway

Approaching from the 5th Street bike lane, traffic cones are placed in the street to force motor vehicle traffic to merge. The configuration is hazardous for bicycles because the cones create a pinch point at the merge where bicycles must run up the curb cut to access the walkway or the pedestrian tunnel. Westbound cyclists must ride downhill on a belgian block sidewalk to access 4th Street. Meanwhile, those coming uphill from 4th Street are discouraged by a "For Official Use Only" sign before reaching the Walkway approach.



Philadelphia South Walkway - Current



Philadelphia South Walkway - Proposed

Above: 5th Street approaching the south walkway

Below: “FOR OFFICIAL USE ONLY” sign on 4th Street Approach to Walkway

Camden North Walkway

The Pavement on the adjacent streets is in extremely poor condition. Access from the south side requires walking in the 5th Street Tunnel. While the tunnel is well maintained, steps on both sides requires bicyclists to lift their bike twice.

Philadelphia North Walkway

East-bound bicyclists must travel the wrong way on the street or use sidewalks to access the north walkway. The 5th Street pedestrian tunnel is poorly maintained with about 20 steps on each end. The sidewalk on the eastern side of 5th St lacks a curb cut. There are no traffic control devices for motorists coming off the Ben Franklin Bridge heading down toward 4th St. Westbound cyclists can ride downhill on belgian block to access 4th St. or head north on 5th Street. The south approach walkway approach routes are the priority for access improvements and are therefore specific improvements are broken out in the recommendations.

Recommendations to Improve the Approach to the Bridge:

- Create better signage in Philadelphia and Camden to lead pedestrians and bicyclists to the bridge.
- Replace traffic cones on the 5th Street approach to the south walkway in Philadelphia with delineators and bike lane striping. Replace the Belgian block sidewalk.
- Improve pedestrian access to the Camden side of the south walkway
- Improve the 5th Street Camden tunnel access for bikes and wheelchairs.
- Improve approach routes to the north walkway in Philadelphia.

6. Reduce Weather-Related Closings

DRPA's no-snow removal policy for the walkways is to close the walkway at the onset of a winter storm and not reopen it until the snow and ice have completely melted. The Authority will not treat the walkway nor will it remove, shovel, or plow snow. During a cold winter, this can cause extended closings even after a minor snowfall. During the 2009-2010 winter, the walkway was closed 45 days. The DRPA justifies the policy because of the difficulty in plowing the walkways, along with concerns about the PATCO line underneath. Another DRPA concern is the freeze/thaw cycle of melting ice trickling from the bridge towers and refreezing on the walkway.

Benjamin Franklin Bridge Closings 2000 to Present

Date Closed	Date Re-Opened	DRPA Reason Given for Closure	Snow/Ice Accumulation
1/20/2000	7/10/2000	decorative lighting installation	
7/29/2000	8/4/2000	RNC in Philadelphia	
10/12/2000	10/15/2000	Painters moving equipment	
11/19/2000	10/22/2000	Painters moving equipment	
9/11/2001	9/13/2001	Reaction to 9/11	
10/13/2001	12/5/2001	first government terrorism alert	Response after KYW News Story on Walkway Security
1/5/2003	1/9/2003	Snow	Reopened two days after a trace was reported on the
1/29/2003	??	Snow	
9/18/2003	9/19/2003	Hurricane Isabel	
12/5/2003	12/9/2003	Snow	
1/15/2004	??	Snow	
3/16/2004	??	Snow	
12/20/2004	??	Snow	
1/22/2005	2/8/2005	Snow	
2/25/2005	??	Snow	
7/9/2005	8/11/2005	DRPA response to London subway bombing	
12/5/2005	1/17/2006	Snow - Security Upgrade	3"
1/18/2006	1-18-2006 10:45AM	High Winds	Winds 8am 22-38 MPH
2/12/2006	2/17/2006	Snow	12"+
3/2/2006	3/3/2006	Weather Conditions	
1/18/2007	1/25/2007	Inclement Weather	.25 inch 1-18, .5 inch 1-22
1/26/2007	1/27/2007 1PM	Inclement Weather	None, 3pm temp 25, wind 17 mph

Benjamin Franklin Bridge Closings 2000 to Present - *continued*

Date Closed	Date Re-Opened	DRPA Reason Given for Closure	Snow/Ice Accumulation
1/29/2007	2/5/2007	inclement weather	1 inch 1-29
2/7/2007	2/11/2007	inclement weather	1/4”
2/13/2007	2/21/2007	Snow-Ice	3”
2/25/2007	2/28/2007	Snow	
3/7/2007	3/11/2007	Inclement weather	1.7 “
3/16/2007	3/22/2007	Inclement weather	3” Ice
4/15/2007	4/16/2007	Inclement weather	4.19 “ of rain
12/3/2007	12/3/2007	Inclement weather	Trace ice
12/5/2007	12/7/2007	Inclement weather	1.6” snow
1/17/2008	1/18/2008	inclement weather conditions and limited visibility	1.0” snow (closed around 4:30 pm 1-17)
2/12/2008	2/13/2008	slippery conditions	
2/22/2008	2/25/2008	Inclement weather	3.2 inches
12/24/2008	12/25/2008	None	trace precipitation/ice
1/11/2009	1-13-09 @ 2:00 PM	ice	.07 inches precipitation
1/15/2009	1-15-09 (pm)	“In the interest of the public’s safety and due to snow,”	none
1/18/2009	1-23-09 @2:00 pm	“Due to weather”	.1 snow 1-18, .8 snow 1-19
1/27/2009	2-2-09 @ 2:15 pm	weather conditions	2” snow (0.88 total precip)
2/3/2009	2-9-09 @6:45 am	snow and sleet	8.2 “
3/2/2009	3-6-09 @2:45 pm		9.0 “
12/18/2009	12/28/2009	inclement weather	23.2” snow
12/31/2009	1/1/2010	weather conditions	0.9” snow
1/8/2010	1/12/2010		1” snow
1-30-10 @ 3:54 pm	2-2-10 @12:53pm		2.1 “ snow
2/3/2010	2-3-10 @1:00 pm		Trace
2/6/2010	2/24/2010	Weather	28.5 “ snow (followed by 15 “)
2/25/2010	3/1/2010	Weather	5.6 “

Right: Brooklyn Bridge walkway, shown open and treated, after a snow event.
Image from: www.inetpix.com/newyork/New_York.html

Below: Manhattan Bridge is shown open and plowed with a clear walkway.
Photo "The Long Haul" by Robonline on Flickr
http://www.flickr.com/photos/robonline/

Other bridges of similar design have found ways to clear the walkways without closing them after winter weather events. The New York City Department of Transportation (NYCDOT) is responsible for removing snow on pedestrian walkways adjacent to bridges.

Since Spring, 2001, all five East River bridges into Manhattan (Brooklyn, Williamsburg, Triboro, Manhattan and Queensboro) have been open 24/7 for Bicycle and Pedestrian Access.[10] NYCDOT has a policy for treating bridge walkways concurrent to streets.[12]

The Williamsburg Bridge walkway open during a snow event.
Photo from Blind Robert's Photosteam on Flickr:
http://www.flickr.com/photos/blindrobert/2344836800/

A Williamsburg Bridge walkway plow at work after a snow event.
Image from TheJamesC's Photostream on Flickr:
http://www.flickr.com/photos/thajimc/4346111043/sizes/o/in/photostream/

The Williamsburg Bridge plowing and open after a snow event.
Image from TheJamesC's Photostream on Flickr: http://www.flickr.com/photos/thajimc/4346110929/in/photostream/

The Williamsburg Bridge walkway remains clear and open after a snow event.

The George Washington Bridge, open and plowed, after a snow event.
http://www.flickr.com/photos/promaine/561792780/

New York is not alone in its consistent snow removal policy for bridges. Milwaukee clears walkways and sidewalks on bridges and overpasses whenever snow warrants street plowing over freeways or interstate highways.[13]

Pedestrian walkways and streets with sidewalks abutting bridges are cleared by the Sanitation Division, but only when a plowing operation is called and there is sufficient snow accumulation to warrant a plowing.

Recommendations for Reducing Weather-Related Closings on the Bridge:

- Adopt a proactive snow-removal policy that maintains walkways and access points throughout the winter and allows for year-round use of the Bridge by pedestrians and bicyclists.
- Pretreat the walkways to minimize ice and snow buildup.

7. Market the Bridge as a Tourist Destination

The Benjamin Franklin bridge is an icon and destination within itself. When completed in 1926, it was the longest suspension bridge in the world, and today is 34th longest. The Chief Engineer, Rudolph Modjeski, went on to design Tacony Palmyra Bridge and San Francisco-Oakland Bay Bridge.

The walkway provides extraordinary views and a unique way to experience the river, yet the bridge is poorly marketed. Improvements to the walkway along with a coordinated effort to market the span could raise the prominance of the Ben Franklin Bridge as a world class structure and a premier destination for Philadelphia and Camden.

Recommendations for Marketing the Bridge as a Tourist Destination:

- Provide wayfinding signage on walking routes to the bridge
- Place visitor amenities on the bridge

Golden Gate Bridge Visitor Center

8. Engage the Community

The DRPA could take some steps to improve participation between the authority and local stakeholders in the community. Currently, the Bicycle and Pedestrian Task Force meets infrequently, usually when requested by the advocates. The DRPA should look to expanding the task force through more frequent meetings and better publicity.

Infrastructure enhancements like signage and landscape improvements will also work toward the goal of improved community relations. Improvements that popularize the bridge will help make the walkways an asset for the surrounding communities. If the bridge's neighbors actively use its walkways, they are more likely to be actively engaged in bridge issues.

Recommendations for Engaging the Community:

- A DRPA representative should attend the Camden Greenways steering committee meetings.
- Formalize a Bicycle/Pedestrian Advisory Committee that meets quarterly with DRPA staff and reports annually to the DRPA Board.
- Improve entrances with welcoming signage.

9. Summary of Recommendations

Improve Walkway Access and Conditions

- Accelerate the design of an ADA accessible ramp on the south walkway in Camden so that construction is coordinated with the construction of the TIGER-funded Pearl Street project.
- Accelerate the expenditure of DRPA capital funds to build the ADA accessible ramp on the south walkway.
- Install security cameras on the walkway and focused on walkway entrances for police surveillance to improve safety and allow for late night access.
- Adopt a 7-day 10pm night closure from April to October.
- Install Call Boxes.
- Remove the catwalk and complete the north walkway to the Camden Steps.

Improve Bicycle and Pedestrian Approach Routes to the Bridge

- Create better signage in Philadelphia and Camden to lead pedestrians and bicyclists to the bridge.
- Replace traffic cones on the 5th Street approach to the south walkway in Philadelphia with delineators and bike lane striping. Replace the belgian block sidewalk.
- Improve pedestrian access to the Camden side of the south walkway.
- Improve the 5th Street Camden tunnel access for bikes and wheelchairs.
- Improve approach routes to the north walkway in Philadelphia.

Reduce Weather-Related Closings

- Adopt a proactive snow-removal policy that maintains walkways and access points throughout the winter and allows for all year-round use of the Bridge by pedestrians and bicyclists.
- Pretreat the walkways to minimize ice and snow buildup.

Market the Bridge As A Tourist Destination

- Provide wayfinding signage on walking routes to the bridge.
- Place visitor amenities on the bridge.

Engage the Community

- A DRPA representative should attend the Camden Greenways steering committee meetings.
- Formalize a Bicycle/Pedestrian Advisory Committee that meets quarterly with DRPA staff and reports annually to the DRPA Board.
- Improve entrances with welcoming signage.

10. Funding Opportunities

- Federal Transportation Funding or SAFETEA-LU - Bicycle and pedestrian programs and projects are eligible for over half the funds. Major funding programs nclude Transportation Enhancements, Congestion Mitigation Air Quality Funds (CMAQ) and Hazard Elimination Funds.

- TCDI-Delaware Valley Regional Planning Commission (DVRPC) to support local development and redevelopment efforts in the individual municipalities of the Delaware Valley that implement municipal, county, state, and regional planning objectives.

- New Jersey Department of Transportation's Bikeway Grant Program - A primary objective of the Program is to support the State's goal of constructing 1,000 new miles of dedicated bike paths.

- Community Development Block Grants - The Department of Housing and Urban Development provides funds for community-based projects, neighborhood-based bicycling and walking facilities that improve local transportation options or help revitalize neighborhoods are eligible for funding.

- DCNR Pennsylvania Recreational Trails Program (PRTP) - Provides funds to develop and maintain recreational trails and trail related facilities for motorized and nonmotorized recreational trail use.

- Private Foundations - Supplemental funding for design and construction can be obtained through private foundations. A recent local example is the William Penn Foundation funding design and construction of an interim riverfront trail along Columbus Boulevard.

- DRPA Capital Program.

- Anti-Terrorism Recovery Funds, announced July, 2009: $2,085,000 http://www.philly.com/philly/news/pennsylvania/20090730_SEPTA_and_DRPA_to_get_money_to_boost_security.html.

- Federal Transit Administration's Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) program.

- Department of Housing and Urban Development Sustainable Communities Planning Grant program.

11. End Notes

1. Adapted from an online publication by Eastern Roads, http://www.phillyroads.com/crossings/benjamin-franklin/

2. *Burlington County Times* - http://blogs.phillyburbs.com/news/bct/tag/delaware-river-port-authority/.

3. *Philadelphia Bicycle News* - http://tinyurl.com/phillies-parade-comments, October 31, 2008.

4. City of Philadelphia, Managing Director's Office of Emergency Management (MDO-OEM), *Philadelphia Readiness Map*, http://oem.readyphiladelphia.org.

5. 2000 US Census.

6. US Dept. of Health and Human Services, *2008 Activity Guidelines for Americans* (2008).

7. Delaware Valley Regional Planning Commission, *E-ZPass Enrollement Discount Plans,* http://www.ezpassnj.com/static/info/discount/DRPA.htm (2009).

8. State of New Jersey, Draft Global Warming Response Plan, http://www.state.nj.us/globalwarming/home/documents/pdf/final_report20081215.pdf (2008).

9. Philadelphia Greenworks Plan, http://www.phila.gov/green/greenworks/

10. Delaware Valley Regional Planning Commission, *DVRPC Energy and Climate Change Statement,* http://www.dvrpc.org/EnergyClimate (2009).

11. Transportation Alternative, http://www.transalt.org/files/resources/bridges/

12. New York Mayors Office 1983, *Assignments of Jurisdiction for Cleaning Certain City Properties (Deputy Mayor of Operations Nathan Leventhal)* (1983)

13. City of Millwaukee Department of Public Works, http://www.mpw.net/Pages/sidesnow.htm (2004).

Appendix - Recommendations and Responsible Agencies

Improve Walkway Access and Conditions

Time Frame	Task	Estimated Cost	Responsible Agency	Notes
Short-Term	Accelerate the design of an ADA accessible ramp on the south walkway so that construction is coordinated with the construction of the TIGER-funded Pearl Street project.	Low	DRPA/ Coopers Ferry Development Corp	
Mid-Term	Accelerate the expenditure of DRPA capital funds to build the ADA accessible ramp on the south walkway.	High	DRPA	
Mid-Term	Install security cameras on the walkway and focused on walkway entrances for police surveillance to improve safety and allow for late night access.	Moderate – High	DRPA	
Short-Term	Adopt a 7-day 10pm night closure from April to October.	Low	DRPA	
Mid-Term	Install call boxes.	High	DRPA	
Long-Term	Remove the catwalk and complete the north walkway to the Camden Steps.	High	DRPA	

Improve Bicycle and Pedestrian Approach Routes to the Bridge

Mid-Term	Create better signage in Philadelphia and Camden to lead pedestrians and bicyclists to the bridge.	Low	DRPA/ City of Philadelphia/ City of Camden	
Mid-Term	Replace traffic cones on the 5th Street approach to the south walkway with delineators and bike lane striping. Replace the Belgian block sidewalk.	Low	DRPA	
Mid-Term	Improve pedestrian access to the Camden side of the south walkway.	Moderate	DRPA/ Coopers Ferry Dev. Corp/ City of Camden/ NJDOT	Work is within the Scope of the TIGER Grant
Long-Term	Improve the 5th Street Camden tunnel access for bikes and wheelchairs.	High	DRPA	

Recommendations and Responsible Agencies - *continued*

Improve Bicycle and Pedestrian Approach Routes to the Bridge - continued

Time Frame	Task	Estimated Cost	Responsible Agency	Notes
Long-Term	Improve approach routes to the North Walkway.	Moderate-High	DRPA/ City of Philadelphia/ City of Camden	

Reduce Weather-Related Closings

Short-Term	Adopt a proactive snow removal policy that maintains walkways and access points throughout the winter and allows for year-round use of the Bridge by pedestrians and bicyclists.	Low-Moderate	DRPA	
Short-Term	Pretreat the walkways to minimize ice and snow buildup.	Low	DRPA	

Market the Bridge as a Tourist Destination

Mid-Term	Provide wayfinding signage on walking routes to the bridge.	Low-Moderate	DRPA/ City of Philadelphia/ City of Camden	
Long-Term	Place Visitor Amenities on the Bridge.	Moderate-High	DRPA	

Engage the Community

Short-Term	A DRPA representative should attend the Camden Greenways steering committee meetings.	Low	DRPA/ Coopers Ferry Development Corp	DRPA has been briefed by Coopers Ferry Dev. Corp
Short-Term	Formalize a Bicycle/Pedestrian Advisory Committee that meets quarterly with DRPA staff and reports annually to the DRPA Board.	Low	DRPA/ Coopers Ferry Dev. Corp/City of Camden/ City of Philadelphia/ Bicycle Coal. of G. Phila/ Rutgers University	
Mid-Term	Improve entrances with welcoming signage.	Low	DRPA	

Contributors

John Boyle, Advocacy Director at the Bicycle Coalition of Greater Philadelphia, drafted this report.

Benjamin Cromie contributed research, photos, and illustrations and designed the layout.

Mathew Anastasi, Bridge Access Campaign Coordinator, provided content, photos, and editorial guidance.

Alex Doty, Exective Director of the Bicycle Coalition, contributed editorial guidance.

Jim Kriebel documented the Benjamin Franklin Bridge walkway open and close dates.

Sarah Clark Stuart, Campaign Director at the Bicycle Coalition, contributed editorial guidance.

Andrew Zalewski contributed research, illustrations and the initial layout.